DOCUMENT RESUME

ED 385 374 PS 023 472

AUTHOR Katz, Lilian G.
TITLE Child Development Knowledge and Teacher Preparation: Confronting Assumptions.
PUB DATE Apr 94
NOTE 24p.; Paper based on presentation at the Annual Conference of the Midwest Association for the Education of Young Children (Peoria, IL, April 1994).
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Child Development; Cultural Influences; *Developmental Stages; Early Childhood Education; *Educational Attitudes; *Knowledge Base for Teaching; Outcomes of Education; *Teacher Education; Teacher Educators; Teaching Methods; Teaching Styles
IDENTIFIERS Parenting Styles

ABSTRACT

This paper questions the widely held assumption that acquiring knowledge of child development is an essential part of teacher preparation and teaching competence, especially among teachers of young children. After discussing the influence of culture, parenting style, and teaching style on developmental expectations and outcomes, the paper asserts that conceptions of what is normal at any stage of development vary widely within and between cultures. The paper challenges the reliability and generalizability of any body of child development knowledge, arguing that even if teacher educators could agree that such knowledge is reliable and generalizable, it would be difficult for them to agree on what specific knowledge and principles should be incorporated into the teacher education curriculum. (Contains 16 references.) (MDM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 385 374

Child Development Knowledge and Teacher Preparation: Confronting Assumptions

Lilian G. Katz, Ph.D.
Professor of Early Childhood Education
Director, ERIC/EECE

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Lilian G. Katz
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This paper is based on a presentation at the Annual Conference of the Midwest Association for the Education of Young Children, Peoria, IL. April, 1994

PS 023472

BEST COPY AVAILABLE

Abstract

This article questions the widely held assumption that child development knowledge is an essential part of teacher preparation and teaching competence. Among the questions discussed are (a) is the available child development knowledge sufficiently reliable and generalizable to warrant inclusion in the preparation of teachers, and (b) if teacher educators were to answer the latter question positively, what specific knowledge and principles of child development would they agree upon as worthy of inclusion?

Child Development Knowledge and Teacher Preparation: Confronting Assumptions

Lilian G. Katz, Ph.D.
University of Illinois

The purpose of this article is to explore some of the widely held assumptions concerning the centrality of child development knowledge in teaching young children. These assumptions first came into question in the process of preparing a response to four essays written by early childhood practitioners in response to the question "What is needed to move beyond an initial level of competence as an early childhood teacher?" (Katz, 1994). The four essayists nominated a variety of competencies that most likely apply to all teachers, not solely teachers of the young. The competencies nominated included, for example, that "teachers should have clear goals," and "should be life-long learners." However, one competence recommended without any apparent hesitation by all four essayists is "the possession of a thorough knowledge of child development."

Similarly. the assumption that child development knowledge is essential for early childhood teachers emerged in a survey conducted in England (Early Childhood Education Research Project, 1994). The majority of head teachers representing every type of early childhood setting ranked "Knowledge of Child Development" as the single most influential contributor to the professional development of

practitioners who work with children under eight years old. The teachers surveyed ranked "Knowledge of School Subjects" relatively low as a factor in the competence of early childhood practitioners. Even the heads of schools for statutory [compulsory] age children and rated "Knowledge of School Subjects" lower in importance to teaching competence than knowledge of child development.

In combination, the four essays by early childhood practitioners and the results of the Early Childhood Education Research Project provoked a discussion with a close colleague[1] concerning precisely how knowledge of child development might influence teaching practices. We began by speculating about how knowledge of the nature of physical development--to say nothing of knowledge of social development--might or should influence the pedagogical and curriculum decisions of teachers of young children.

Our first assumption was that knowledge of physical development would cause a teacher to assume that four-year-olds are "by nature" physically active and therefore cannot remain still for very long; we agreed that this principle of physical development should be taken into account in planning curriculum and designing pedagogy.

On further reflection however, we realized that this developmental principle may have limited generalizability. In many countries young children--even toddlers--sit still for what seem to American observers to be very long periods of

[1] Dr. Eileen T. Borgia, University of Southern Illinois at Edwardsville, IL

time. We then acknowledged that young children in our own country are capable of being still for extended time periods as, for example during lamentably long periods they sit in front of television sets. These examples, of course, should not be taken to imply that young children necessarily like to sit still for very long periods, or that such experiences enhance their physical, social, or intellectual development. Nonetheless, this discussion led me to question the tacit assumptions implied by the four essayists and our English colleagues that mastery of child development knowledge and principles can contribute significantly and positively to competence in teaching and curriculum planning for young children.

As a result of these challenges to my assumptions, I began to question what is meant by development in general, and child development in particular, and whether it is reasonable to assume that there is an agreed upon body of child development knowledge and principles teachers can use as a basis for decisions about appropriate curriculum and pedagogical practices. I no longer possess the certainty I once did concerning the reliability of child development knowledge, and hence its value to teachers of young children. The discussion that follows outlines my struggle with the "conceptual itch" that arose from the questions described above.

What Is Meant by the Term Child Development?

As a noun, development refers to the end of a process of bringing something from latency to fulfillment (American Heritage Dictionary, 1993). As a verb, it means to "cause to become more complex or intricate; to cause gradually to acquire specific roles, functions, or forms, to grow by degrees into a more advanced or mature state." In biology, the term means "to progress from earlier to later stages of a life cycle; to progress from earlier to later or from simpler to more complex states of evolution" (American Heritage Dictionary, 1993).

Miller (1983) asserts that

> What is critical about developmental theory is that it focuses on change over time. Although developmental theories have nondevelopmental theoretical concepts such as id, mental representation, attention, and drive, they diverge from nondevelopmental theories by emphasizing changes over time in these concepts (p. 5).

These definitions suggest that when we use the term child development we are invoking a set of concepts, principles and facts that explain, describe and account for the processes involved in change from immature to mature status and functioning[2]. In other words, we are referring to a particular kind of change: change that is dynamic rather than

[2] For example, in discussion of language development we would explain, describe and account for the processes involved in the change from babble and baby talk to mature linguistic competence in use of the mother-tongue.

linear. Change in height for example, is linear and incremental; changes in behavior, however, are dynamic in that they cause reactions that create changes in behavior that, in turn, cause reactions, often in ways that are difficult to anticipate, predict, or control. Similarly, change in weight is linear--incremental or decremental; but the changes addressed in the study of development, whether healthy or unhealthy, cannot be reversed or taken away in linear fashion.

Note also that we offer courses titled "child development," not "child change." The main point of the distinction between development and change, however, is that when we study and discuss child development we are by definition--even if only implicitly--concerned about an "end state," or an ultimate mature or final state of some kind, and how early experience contributes to later functioning. We might say, for example, that under certain kinds of adverse conditions a child will grow up to be an immature adult; such a prediction would imply a conception of a healthy and desirable mature end state. That is to say that a major value of child development knowledge is its power to predict the effects of early experiences on the ultimate mature status of the organism.

In a certain sense, all child rearing, and all socialization of the young--of which education is a sub-category--is future oriented. Even a culture that teaches its children to worship ancestors, does so in anticipation of its

children's future behavior and beliefs. Such cultures make implicit and explicit assumptions about the relationships between experiences provided its young and the long term effects of those experiences. Surely adults in all cultures, no doubt in diverse ways, strive to behave so as to ensure that their young children will believe basically what they themselves believe, and will when fully grown, have the general feelings of well-being and patterns of behavior they have themselves (LeVine, 1988). In this sense, assumptions are always being made by parents as well as educators, about which beliefs and feelings are essential for the ultimate well-being of children, and which ultimate competencies necessary in the communities in which we expect them to be able to participate and contribute.

A generation ago I recall that my colleagues and I in the field then called nursery education generally identified our pedagogical philosophy and developmental theory as a *psychodynamic* one. I believe, in retrospect, that we were particularly keen to contrast our view of the nature of development with behaviorist theory, which is, after all, a theory of learning, and not a theory of development. The psychodynamic view, at least at that time, was one that assumed that some child rearing and educational practices were more or less likely to produce certain kinds of mature personality and intellectual dispositions and competencies. Research and study of the child development knowledge base was designed to provide us with a basis for assessing and

predicting the potential merits and risks of nursery teaching practices. In the 1950s we discussed our mission in terms of children's *needs*. Katherine Read refers to children's needs throughout her classic book *The Nursery School* (Read, 1950). She introduces assumptions about meeting early needs and mature functioning put this way:

> The way our needs were met during [the early] period of dependency is still affecting what we do. If we lived with people on whom it was good to be dependent because of the warmth and abundance of their giving, if we were fed when we felt hungry, played with and loved when we wanted attention, we were *satisfied* during this period of dependency ...we are now neither fighting against being dependent nor seeking reassurance by demanding more protection than we need [italics hers] (Read, 1950, p. 10)

However, conceptions of needs always imply risks or undesirable conditions that will befall the needy if they are not met (Dearden, 1972). Assertions about needs are based on implicit assumptions about the nature of development and/or about human nature itself (e.g. young children need to be read to, without which they will be unready for school). In the 1950s for example, we assumed young children needed opportunities to "let off steam" without which they would suffer painful frustration. Child development research based on social learning theory cast grave doubts about that assumption, however (Bandura & Walters, 1963). While it is clear that humans need air, food and water, without which they will perish, the "needs" paradigm raises questions about which needs are learned, how they are learned and how

culturally embedded the learned needs may be.

Conceptions of the ultimate end state of development, and assumptions about the processes involved in reaching them, have undergone substantial revision and re-examination in the last several years. As Damon (1989) points out that

> child development has been exposed to many jarring alternatives over the past twenty years. Anthropologists have challenged developmental universals and made us increasingly aware of cultural diversity...our old view was incomplete and perhaps therefore distorted...A new perspective can have a jarring effect on existing sensibilities, particularly when the new perspective carries with it alternative assumptions about the nature of things. This can be as unsettling as it is intellectually delightful(p. 2).

I suspect now that much of the contentiousness in recent discussions of developmentally appropriate practices is related to unacknowledged differences among us in (a) our conceptions of the ultimate goals of development, and (b) our assumptions about how they are best achieved for children growing up in significantly different present environments. and who are expected to be competent in unknowable future environments.

If, however, the main problem among early childhood educators were simply our different conceptions of the ultimate goals of development, the links between child development knowledge and teacher preparation could simply be argued on the basis of diverse cultural expectations and preferences, rather than on whether this particular branch of

knowledge is an appropriate basis for making decisions about curriculum and teaching methods.

Unfortunately, the irksome "conceptual itch" that has arisen from acknowledgment of cultural diversity cannot be so easily resolved. The itch's resistance to treatment stems from the fact that the body of knowledge and principles governing the presumed relationships between early experience and mature development that many of us have long taken for granted is based on evidence gathered largely from a limited sample of human experience. Consequently, this body of knowledge of child development no longer seems sufficiently generalizable to serve as a basis for curricular and pedagogical decisions.

Holloway (1991) addresses this issue in a study of caregivers' cognitions and children's behavior in child care environments. Holloway cites the rich body of research on the contrasting effects of authoritarian and authoritative parenting styles based on Baumrind's now classical constructs (1973). Holloway points out that whereas the authoritarian parenting (and teaching) style--in contrast to an authoritative one--may be associated with coldness and anger in upper-middle class white families

> the more authoritarian social norms of the black parents may have reflected the actual conditions necessary for optimal development, and hence may have been experienced by the child as supportive and reassuring (p. 9).

Furthermore, differential long term effects for diverse ethnic groups of these two parenting (and teaching) styles on

school performance and other developmental milestones through adolescence have been demonstrated by subsequent research on the development of children of diverse ethnic groups in California (see Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994).

The finding that parenting and teaching styles are differentially effective for diverse populations is not in and of itself, unsettling. What <u>is</u> unsettling is the challenge this finding presents to traditional developmental assumptions that while the <u>behavior</u> patterns resulting from the differential styles may be effective in early childhood, the behavior patterns and well-being of the fully developed adult may not be predictable therefrom. Traditional notions of development might suggest, for example, that authoritarian parenting is effective as long as authority figures are present to enforce compliance, but, authoritarian parenting may result in an absence of internalized impulse control that is manifested only when the authoritarian adults are no longer present. How can we tell if this is really so? Is such an assumption based on a kind of zero-sum conception of development--namely, that if the organism is shaped to fit one type of girdle, its bulges will protrude one way, and if shaped differently, the organism's bulges will stick out somewhere else? Is not this assumption based on the notion that all human organisms have the same or very similar impulses and needs that must be shaped or contained one way

of another, and that how child rearers address them has predictable long term consequences?

Edwards (1994) offers several examples that shake our customary assumptions about the relationships between early experience and later development. She describes the experience of toddlers in the Zinacanteco community in which a previously all-giving mother of a toddler abruptly turns all her attention to a new baby leaving the toddler hovering in the mother's vicinity appearing "listless and dejected" (p. 3). Yet, after a period of adjustment the toddler seems to rebound quite well.

Traditional developmental theory would suggest that such an apparently traumatic change in the toddler's relationship with the mother would have long term psychological consequences that would be manifested in adult personality traits. But, given Edwards's observations, can we remain certain that this direct cause and effect relationship exists? And, how would we know? A more important question, perhaps, is whether an answer to this question really matters to the practice of early childhood teachers? And, how can we decide whether or not it matters?

Edwards (1994) also describes a culture in which the practice of restricting a child's food intake, as American mothers frequently do, would seem "terrible, unthinkable, the next thing to child abuse" (p. 7) to a mother in a very different culture and environment. In both of Edwards' examples, it is seems that the *meaning* the child attributes

to the mother's behavior is the critical factor in determining the effect particular experiences will have on the child's development. But, given such differences in the meanings children attribute to their parents' behaviors, and given that meanings are always a function of the total context in which experience occurs, what is left to know about child development?

It seems reasonable to assume that all children attribute meaning to their experiences. Are some "meanings" more likely than others to result in healthy psychosocial development? Is it reasonable to assume that there is such a thing? Can we agree on what characterizes sound development? Even though the issue of whether we could agree on the ultimate goal or outcome of development and the processes by which they are most likely achieved, questions remain concerning how they might be related to teaching practices in early childhood education.

Application of Child Development Knowledge

We often cite the importance of preparing children to participate in a democratic society as a criterion for designing curriculum and pedagogical practices. Indeed, preparation for democracy may be one of the very few goals educators can still agree on. Broudy (1977) defines commitment to the democratic process as a fundamental unifying principle of Americans, stating that "consensus for this principle is based not only on rational grounds, it is

part of the common moral intuition. It may be called our fundamental moral reflex" (p. 76). However, if we do not know enough about the relationships between early experience and the ultimate competencies necessary for effective participation in democratic processes, how can we design appropriate educational practices?

Let us ponder for example, the traditional claim of early childhood thinkers, such as Maria Montessori, that it is developmentally appropriate to teach young children a strong sense of universal brotherhood, some even claiming that children are born free of prejudice or bias with respect to those who are different from them. These claims seem to be common sense. But a case could be made, at least in "theory," that it is developmentally appropriate for young children to believe that their own family, group, or village is the best, or better than others, and that cultural relativity is developmentally inappropriate, or even impossible in the early years. On the contrary, it may serve development well for the young children to have a clear sense of what is 'normal' and 'abnormal,' 'our way' not 'our way,' good and bad, right and wrong, while their characters are still in formation. A developmental perspective can be taken to suggest that the real long term developmental task is to *outgrow* this immature assessment of what is normal, abnormal, good or right or best, etc.. Genuine acceptance, belief in and commitment to universal brotherhood and

equality surely require a long maturing process, and are unlikely to simply be in-born.

These questions simply raise further questions. Who is responsible for defining the desired outcomes of development? Can we come to a reasonable consensus on desirable outcomes that has enough detail to be meaningful? What assumptions can we make about the processes and procedures by which to reach the ultimate goals of development? Clearly conceptions of the desirable ultimate goals of development are culture-bound. But what do we mean by 'culture' in this context? Everyone participates in a culture; in our country it is likely that most of us participate in several cultures and sub-cultures simultaneously. Conceptions of what is 'normal' at any stage of development and at "end" states probably vary widely within as well as between cultures. Similarly, conceptions of what is normal versus merely within acceptable limits of behavior and of what is superior rather than inferior human development, also vary within and between cultures.

Conceptions of the ultimate goals of development very likely undergo constant change. It is unlikely that the cultural contexts in which our present students of early childhood teacher education are likely to work will remain static throughout their careers. Furthermore, children are unlikely to have the very same beliefs and feelings or to attribute the same meanings as their parents to important aspects of their lives.

Perhaps the processes by which development is achieved are so complex that they are very largely unknowable. Perhaps a developmental process may be effective in context A, but not in another, and similarly, a process may be ineffective or even negative in context B, but not in context C.

Furthermore, while it may be easy for us to accept the proposition that conceptions of the desired ends of development are culture-bound, it is more difficult to acknowledge and accept the proposition that the concept of development itself is a product of culture, and that all concepts are cultural products, including the concept of culture itself!

However, if we pursue this line of reasoning, we quickly reach a state of infinite regress and of reasoning backwards to a point where we can easily become conceptually incapacitated and paralyzed. It seems reasonable as well as practical to assume that the processes involved in development are not random; in which case they must be in some sense, systematic, even if the system is so complex that it is not--at least as yet--sufficiently knowable. Holding on to this belief is certainly reassuring. I have long assumed I understood enough about the 'system' to be able to present some principles of development to students. The current debate about developmentally appropriate practice has alerted me to possible weaknesses in that understanding. However, the debate has not only failed to provide a better explanation for the changes described by development and how early

experience determines later functioning; it has caused me to wonder whether such a theory and set of principles of development are even possible!

What Child Development Knowledge Should Be Learned?

The "analysis paralysis" that may result from this line of reasoning is not likely to be helpful for teachers, even if it makes good material for scholarly exchange! Suppose, therefore, that we decide to postpone these doubts--just for the moment--and assume that a body knowledge of child development is available. Can we agree on what of that body of knowledge teachers of young children should learn? If we were required to plan a common course on child development, would we agree on what should be included? How much of Piaget, neo-Piaget, or post-neo-Piaget, constructivism, and so forth, should be covered? Which concepts from psychoanalytic developmental theory, Erikson's theory, social learning and social constructivist theory should be mastered? How should we deal with the fact that much of our available child development knowledge stresses individual progress from immaturity to maturity and seems to overlook, or at least under-appreciate group dynamics, and the fact that no individual can realize even part of his or her potential without a baseline of group interactive competencies that include adherence to some minimum group and cultural norms? Furthermore, for increasing proportions of our children, full realization will require interactive competencies to enable

them to function simultaneously in several cultures, each of which has its own group norms.

If it is difficult to draw reliable implications from knowledge of children's physical development, how much more complex would it be to develop a consensus on the essentials of social, emotional and intellectual development? To what extent would we agree upon answers to these questions, and what would be that basis of any agreement be reached? Could we agree on what knowledge is essential rather than just desirable? Can we even concur on how the agreed-upon knowledge and principles of child development can and should influence practice? Is some child development knowledge is more useful and more relevant to practice than some other.

There is some research, for example, to suggest that US children understand calendar concepts very poorly until about the age of six (Zhang, 1993) even though they engage in discussions of the calendar daily in many cases for as long as two years! Does this "bit" of child development knowledge imply that the standard calendar ritual in preschool and kindergarten classes be abandoned completely? In our child development and teaching methods courses should we insist that our students eschew the calendar ritual? Or that they teach it only to those children who are tested as "ready" for it? If we are behaviorists, we might assert that what is required are better instructional methods and suitable reinforcement strategies. However, suppose we were committed to a social constructivist view of teaching and learning--

should we teach our education students to co-construct calendar concepts with the children, or let children "discover" these concepts for themselves? Inasmuch as all children eventually grasp calendar concepts correctly--perhaps in spite of premature rehearsal of them in preschool and kindergarten--does this decision-making process even matter? I, for one, am still prepared to assert that there are many activities more worthy of young children's time and energy than the calendar ritual. But this position raises the question of *who* is to decide what knowledge is worthwhile for preschoolers and kindergartners? And on what bases can or should the worthiness of knowledge be determined?

Where Do We Go From Here?

This query of course, is the ultimate question posed by this special issue. For many years I have suggested to my students, most of whom are practicing teachers, that it is a good idea for practitioners to strive for a balance between sufficient skepticism to be able to continue to learn, and sufficient conviction to be able to act with confidence (Katz, 1995). In a certain sense, to teach is to act--even if the 'act' is sometimes to withhold action in a given context! It seems reasonable to assume that effective teaching requires us to act with <u>optimal</u> (rather than maximal or minimal) certainty in the rightness of our actions, i.e. to act with optimal intentionality, clarity, and decisiveness. Such actions require us to make assumptions--even in the

absence of robust evidence--about how early experiences influence children's long term development.

Thus, I am confronted by a dilemma. By definition, a dilemma is a predicament in which each of two alternative courses of action--one of which must be taken--are equally desirable or undesirable, and in which taking one of the courses of action undermines the potential benefits and values that might be derived if the other "horn" of the dilemma had been chosen. The quandary is that I am not yet clear about the nature of the two horns of my dilemma. On the one hand, I continue to believe that in order to be effective, practitioners must have optimal confidence in their own actions and the underlying assumptions on which they are based. On the other hand, if that base is not provided by the knowledge and principles of child development, then what other bases could be used?

The main question seems to me to be the extent to which our current child development knowledge is reliable enough to serve as a basis for predicting the course of development. Without reliability, the additional issue of the role of child development knowledge in teacher preparation and competence is a moot one. Our deliberations on this question can have profound implications for a field that has very largely built its professional identity on the curricular and pedagogical applications of child development knowledge.

References

American Heritage Dictionary. Third Edition. (1993). NY: Houghton Mifflin.

Bandura, A. & Walters, R. H. (1963). *Social learning & personality development*. New York: Holt, Rinehart & Winston.

Baumrind, D. (1973). The development of instrumental competence through socialization. In A. D. Pick (Ed.), *Minnesota symposium on child psychology* (Vol. 7.) Minneapolis: University of Minnesota Press. 3 - 46.

Broudy, H. S. (1977). Educational unity in a pluralistic society. *School Review*. November. 71 - 81.

Damon, W. (1989). (Ed.). Introduction: Advances in Developmental Research. *Child development today and tomorrow*. San Francisco: Jossey-Bass. 1 - 13.

Dearden, R. F. (1972). "Needs" in education. In R. F. Dearden, P. H. Hirst, & R. S. Peters, (Eds.). *Education and the development of reason*. London: Routledge & Kegan Paul. 50 - 64

Early Childhood Education Research Project. (1994). *Interim report. Principles into practice: Improving the quality of children's early learning. Year One: June 1993 to May 1994*. London, England: Goldsmith's College, University of London.

Edwards, C. (1994). *Cultural relativity meets best practice*. A paper presented at the annual meeting of the American Educational Research Association, New Orleans, April. 1994.

Holloway, S.(1991). *Caregiver cognition and behavior in day-care classrooms*. A paper presented at the annual meeting of the American Educational Research Association, Chicago. April. 1991.

Katz, L. G. (1994) Knowledge of child development and the competence of developing teachers. In Day, D. & Goffin, S. (Eds.). *New perspectives in early childhood teacher education: Bringing practitioners into the debate*.. NY: Teachers College Press. 124 - 127.

Katz, L. G. (1995). Pedagogical issues in early childhood education." In L. G. Katz (Ed.). *Talks with teachers of*

young children. A collection. Norwood, N. J. Ablex Publishing Co. 97 - 118.

LeVine, R. A. (1988). Human parental care: Universal goals, cultural strategies, individual behavior. In R. A. LeVine, P. M. Miller, M. M. West. (Eds.) *Parental Behavior in Diverse Societies*. New Directions in Child Development. 40. San Francisco: Jossey Bass.

Miller, P. H.(1983). *Theories of developmental psychology*. W. H.. Freeman and Co. San Francisco.

Read, K. H. (1950). *The nursery school. A human relationships laboratory*. Philadelphia: W. B. Saunders Co.

Steinberg, L., Lamborn, S., Darling, N, Mounts, N. S., & Dornbusch, S. M. (1994). Over-Time Changes in adjustment and competence among adolescence from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*. 65, 754 -770.

Zhang, L. (1993). *Children's understanding of calendar concepts*. Unpublished doctoral dissertation. University of Illinois. Urbana, IL.

July, 1995.